

Replay to: International Search Report, Mailed on 25/Nov/2003

While replay concerning most relevant prior art solutions has been given in the attached amended part "BACKGROUND OF THE INVENTION", the remaining references given in the report are addressed below as they are not relevant enough to be discussed in the patent document without downgrading its quality.

Generally speaking the original "BACKGROUND OF THE INVENTION" has not been specific enough and the original claims were too general and not clear enough to avoid infringement on some patents indicated in the relevant documents list. On the other hand the specification has not been examined thoroughly enough and many shown in the specification fundamental differences and contributions have not been recognized as it is indicated below.

The D1 (US 5,668,830 invented by Georgiou et al) is limited to using delay lines and most basic digital filters for removing phase sample noise. D1 circuits enable merely phase aligning and data re-timing on a bit per bit basis for data serializing/de-serializing only. Consequently, D1 does not have any of the fundamental features of the present invention such as; continuity of over-sampling of entire pulse necessary for amplitude glitches elimination, or high processing throughput necessary for calculating and processing lengths of transmitted pulses, or wave-form screening and adaptive noise filtering.

Therefore D1 can not have any significant relevance to the present invention if new claims are taken into the consideration.

The D2 is addressed in the "BACKGROUND OF THE INVENTION".

The D3 (US 4,977,582 invented by Zelle Bruce et al) is limited to using delay lines for adjusting phase delay of transmitted data bits. However, D3 circuits do not have any of the fundamental features of the present invention such as; continuity of entire pulse over-sampling necessary for amplitude glitches elimination, or high processing throughput necessary for calculating and processing lengths of transmitted pulses, or wave-form screening and adaptive noise filtering.

Therefore D3 can not have any significant relevance to the present invention if new claims are taken into the consideration.

The D4 (US 5,467,464 invented by Oprescu Florin et al) is limited to using a captured delay line for a de-skew design. D4 circuits do not have any of the major features of the present invention which are essential for any measurements and processing of transmitted pulses lengths and for any data recovery.

Therefore D4 can not have any significant relevance to the present invention if new claims are taken into the consideration.

The D5 is addressed in the "BACKGROUND OF THE INVENTION", were it is re-numbered to D1.

The D6 (US 5,872,791 Propp David et al) is totally unrelated to the original claims 34-38 which define arithmetic division algorithm having nothing in common with the D6 data coding or error correction algorithms.

The D7 (EP 0 292 208 American Telephone & Telegram) is totally unrelated to the original claims 34-38 which define arithmetic division algorithm having nothing in common with the D7 bits stuffing into a transmitted data frame for synchronization purposes.

Conclusion

Based on the application improvements and the above clarifications, it is thus respectfully submitted that the invention taught and defined herein by the claims embodies patentable subject matter.

The Examiner is earnestly solicited to give favorable consideration to this application and pass it to allowance.

Respectfully submitted,

By: 
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24 / December / 2004